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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Nobuyuki Enomoto, et al.

Serial No.: 10/642,481

Group Art Unit: 2445

Filed: August 18, 2003

Examiner: Biagini, Christopher D.

For: NETWORK SYSTEM, LEARNING BRIDGE NODE, LEARNING METHOD AND  
ITS PROGRAM

Honorable Commissioner of Patents  
Alexandria, VA 22313 – 1450

**APPELLANTS' REPLY BRIEF ON APPEAL**

Appellants herein respectfully reply to the Examiner's Answer mailed on October 19, 2010, by responding to points raised in the Examiner's Response to Arguments.

First, Appellants respectfully submit that the specification of the present Application clearly discloses to one ordinary skill in the art, *"said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flows; and the MAC SA table cache which stores a source MAC address which has made a learning frame transmission request, said main signal frame having said source MAC address and said destination MAC address,"* (emphasis added by Appellants) as recited in claim 3, and similarly recited in claims 18 and 33.

The Examiner alleges that the specification provides no support for *"said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flows; and the MAC SA table cache which stores a source MAC address which has made a learning frame transmission request, said main signal frame having said source MAC address and said destination MAC address,"* (emphasis added by Appellants) as recited in claim 3, and similarly recited in claims 18 and 33. The Examiner, however, is clearly incorrect.

That is, contrary to the Examiner's allegations, at least Figs. 38-40 and corresponding description, and more specifically page 4, lines 12-16; page 5, lines 5-12; page 62, lines 10-13; page 109; line 25 – page 110, line 1; page 113 lines 13-27; and page 114, lines 11-14 of

the specification of the present Application clearly disclose the aforementioned features of the claimed invention.

For example, the specification of the present Application on page 113 lines 13-27, referring to exemplary Figs. 38-40, discloses:

*“In this embodiment, even when the asymmetrical flow is flown by sending the learning frame through a path opposite to the path where the main signal frame flows, the learning process can be functioned, the network congestion can be remedied from becoming congestion, and the bandwidth usability can be improved.*

*Conventionally, when a frame having a tag indicating a destination was transferred, it was necessary to previously set an expansion tag (forwarding tag) to be added for each node according to the destination MAC address.*

*In this embodiment, the expansion tag to be added to each node according to the destination MAC address can be set by containing tag information in the learning frame, and the setting operation can be automated” (emphasis added by Appellants).*

Similarly, with regard to the “main signal frame” recited in claims 3, 18, and 33, the specification of the present Application on page 109; line 25 – page 110, line 1, referring to exemplary Figs. 38-40, discloses:

*“In this example, the frame sent from the client C3 is determined as the ICMP ECHO REQUEST, so that the basic software of the client C1 creates an ICMP ECHO REPLY frame of the destination MAC address c3 and the source MAC address c1 and sends to the node G1. This frame is referred to as the main signal frame in the following description” (emphasis added by Appellants).*

Further, the specification of the present Application on page 4, lines 12-16, referring to exemplary Figs. 38-40, discloses:

*“a learning frame management unit which refers to a MAC SA table cache to determine whether a learning frame transmission request is made or not, and a MAC SA table cache which stores a source MAC address (MAC SA) which has made a learning frame transmission request” (emphasis added by Appellants).*

Also, the specification of the present Application on page 5, lines 5-12, referring to exemplary Figs. 38-40, discloses:

*“According to another aspect of the invention, a learning bridge node of a network having plural nodes connected, comprising a learning*

*frame management unit which refers to a MAC SA table cache to determine whether a learning frame transmission request is made or not, and a MAC SA table cache which stores a source MAC address (MAC SA) which has made a learning frame transmission request*” (emphasis added by Appellants).

Accordingly, contrary to the Examiner’s allegations, the specification of the present Application clearly discloses to one ordinary skill in the art, “*said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flows; and the MAC SA table cache which stores a source MAC address which has made a learning frame transmission request, said main signal frame having said source MAC address and said destination MAC address,*” (emphasis added by Appellants) as recited in claim 3, and similarly recited in claims 18 and 33.

Therefore, Appellants respectfully traverse the Examiner’s findings of facts and respectfully request that the Board to confirm that the specification of the present Application supports the aforementioned features of claims 3, 18, and 33.

Secondly, Appellants respectfully traverse the Examiner’s rejection and submit that one of ordinary skill in the art would have sufficiently understood what is being claimed and what the “metes and bounds” of the invention covers.

The Examiner alleges that one with ordinary skill in the art would not have clearly understood “*said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flows; and the MAC SA table cache which stores a source MAC address which has made a learning frame transmission request, said main signal frame having said source MAC address and said destination MAC address,*” (emphasis added by Appellants) as recited in claim 3, and similarly recited in claims 18 and 33. The Examiner, however, is clearly incorrect.

That is, contrary to the Examiner’s allegations, one with ordinary skill in the art would have clearly understood the claimed features, which recite that the learning frame is transmitted to a path opposite to another path in which a main signal frame flows, and main signal frame has the source MAC address and the destination MAC address, as recited in claims 3, 18, and 33.

More specifically, as set forth above, at least Figs. 38-40 and corresponding description, particularly on page 4, lines 12-16; page 5, lines 5-12; page 62, lines 10-13; page

109; line 25 – page 110, line 1; page 113 lines 13-27; and page 114, lines 11-14 clearly disclose the aforementioned features of the claimed invention and the benefits that could be achieved by applying the claimed features.

Particularly, with the claimed features, even when the asymmetrical flow is flown by sending the learning frame through a path opposite to the path where the main signal frame flows, the learning process can be functioned, the network congestion can be remedied from becoming congestion, and the bandwidth usability can be improved (e.g., see Application at page 113, lines 13-27). Further, because the tag information is included in the learning frame, the setting of the forwarding tag to be added can be automated (e.g., see Application at page 114, lines 15-18).

Further, Appellants dispute the Examiner's allegations on page 6, lines 5-7 of the Examiner's Reply alleging that claims 3, 18, and 33 recited "*multiple source MAC addresses*."

Appellants submit that contrary to the Examiner's allegations, claims 3, 18, and 33 clearly recited only one source MAC address, not multiple source MAC addresses, as alleged by the Examiner.

Moreover, with regard to the Examiner's comments on page 14, lines 6-9 of the Examiner's reply, Appellants submit that as clearly taught in the specification of the present Application, for example, on page 113 lines 13-27, referring to exemplary Figs. 38-40, the asymmetrical flow is flown by sending the learning frame through a path opposite to the path where the main signal frame flows.

Therefore one of ordinary skill in the art would have sufficiently understood flowing a flow (i.e., flow is flown).

Therefore, Appellants respectfully traverse the Examiner's findings of facts and respectfully request that the Board to confirm that one of ordinary skill in the art would have sufficiently understood what is being claimed.

Thirdly, Appellants respectfully submit that the prior art rejection of record fails to demonstrate all elements of the claimed invention, since there is no demonstration of that "*a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame, said destination tag information being included in a learning frame*

that said network transmits to a path opposite to another path in which a main signal frame flows; and the MAC SA table cache which stores a source MAC address which has made a learning frame transmission request, said main signal frame having said source MAC address and said destination MAC address,” emphasis added by Appellants) as recited in independent claim 3, and similarly recited in independent claims 18 and 33.

That is, the 802.1D specification and Viswanath, either alone or in combination (arguendo) fail to teach or suggest, “*said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flow,*” as recited in claim 3, and similarly recited in claims 18 and 33.

The 802.1D specification’s deficiencies with regard to claims 3, 18, and 33 are clear and, as admitted by the Examiner, the alleged reference fails to teach or suggest the opposite path (Office Action at page 6, last paragraph).

The Examiner attempts to rely on Viswanath for making up the deficiencies of the 802.1D specification. The Examiner, however, is incorrect.

That is, columns 6 and 7 of Viswanath, upon which the Examiner bases the rejection, merely disclose processing of a frame with VLAN tag and the frame without VLAN tag in an integrated multiport switch. Viswanath, however, in columns 6 and 7 (or anywhere else, for that matter) fails to teach or suggest, “*said destination tag information being included in a learning frame that said network transmits to a path opposite to another path in which a main signal frame flow,*” as recited in claim 3, and similarly recited in claims 18 and 33. Thus, Viswanath fails to satisfy the plain meaning of the claim language, and therefore, fails to teach or suggest the aforementioned feature of the claimed invention.

Since Viswanath does not overcome the deficiencies of the 802.1D specification, the combination of references fails to render the rejected claims obvious.

Moreover, Appellants respectfully submit that these references are unrelated and would not have been combined as alleged by the Examiner. Thus, a person of ordinary skill in the art would not have considered combining these disparate references, absent impermissible hindsight.

Further, Appellants submit that there is no motivation or suggestion in the references or elsewhere (and thus no predictability for one of ordinary skill in the art) to urge the combination as alleged by the Examiner. Indeed, these references clearly do not teach or

suggest their combination. Therefore, Appellants respectfully submit that one of ordinary skill in the art would not have combined the references as alleged by the Examiner.

Therefore, Appellants respectfully submit that, one with ordinary skills in the art would not have combined the 802.1D specification with Viswanath, and even if combined, the alleged combination does not teach or suggest (or render obvious) each and every feature of the claimed invention.

Indeed, Appellants have demonstrated that none of the references relied upon in the rejection of record demonstrates the element of the claimed invention of the ordered sequence being multivariate. Nor does the rejection of record even properly identify the differences between the cited references and the claimed invention. Finally, Appellants submit that the rejection of record fails to provide a reasonable rationale to modify primary reference to arrive at the invention defined in the independent claims.

Finally, with respect to the Examiner's objection to the drawings, Appellant submit that, as set forth above, the drawings of the present Application at least in exemplary Figs. 38-40 clearly show the claimed destination tag information that is included in a learning frame that the network transmits to a path opposite to another path in which a main signal frame flows, as recited in claims 3, 18, and 33.

Furthermore, regarding the Examiner's objection to the specification, Appellant submit that, as set forth above, the specification at least in Figs. 38-40 and corresponding description, and more specifically in page 62, lines 10-13, page 112, lines 21-26, page 113, lines 13-18, and page 114, lines 11-14 clearly disclose the claimed destination tag information that is included in a learning frame that the network transmits to a path opposite to another path in which a main signal frame flows, as recited in claims 3, 18, and 33.

Accordingly, Appellant respectfully submits that claims 3-5, 7-9, 11-14, 18-20, 22-24, 26-29, 33-35, 37-39, and 41-44, all the claims presently examined in the application, are clearly patentably distinct over the prior art of record and are in condition for allowance.

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The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Date: 12/3/10

Respectfully Submitted,

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